

New Burmo-Chinese Species of *Didymocarpus*.

BY

W. W. SMITH.

With Plates CIII.-CVII.

THE descriptions of the following six species of *Didymocarpus* are based on material in the Herbaria of the Royal Gardens at Kew and Edinburgh. I am indebted to the Director of Kew for the loan of several sheets, which have been of much service.

I have not followed Kuntze in including under the generic name *Roettlera*, Vahl both *Didymocarpus* and *Chirita*. The distinguishing mark between these two genera is the character of the stigma which is entire in *Didymocarpus* and bifid in *Chirita* (Bentham and Hooker, Gen. Plant., vol. ii. p. 995). This character is, however, supported by the distinct facies of each in the field and to a certain extent a difference in habitat. The *Didymocarpi* are plants of the rock-clefts, while the *Chiritae* are usually at a lower altitude and less restricted in their choice of habitat. The difference in facies is one rather difficult to define in words, but in areas such as the Eastern Himalayas where both genera are well represented, the general aspect of each is so distinct that examination of the characters of the stigma is not necessary in determining the genus of a specimen in the field.

Exceptional forms do occur, however, in other areas. Thus *Didymocarpus Lacei*, W. W. Smith, from the Gokteik Gorge in Upper Burma is a species with the *Chirita* facies but with the stigma of the *Didymocarpi*. The genus *Didymocarpus* was recognised by Bentham and Hooker as a very polymorphic one and easily separable into sections worthy of generic rank. The number of species of this and allied genera yet to be obtained from S.E. Asia is in all probability so large that it is expedient to retain what is undoubtedly a satisfactory division in most instances. This is true especially of the *Eu-didymocarpi*. If *Chirita* is included, the position of *Didissandra* would also have to be considered, for certain species of that genus approach very

[Notes, R.B.G., Edin., No. XXIV., January 1912.]

closely in aspect to *Chirita* as well as to *Didymocarpus*. The increase of the number of perfect stamens is a character not very much more secure in this order than the form of stigma. I have little doubt that *Didymocarpus* will ultimately be split up, and in that case *Roettlera* would be a fitting generic name for the present section *Orthobaea*, as suggested by Bentham and Hooker (Gen. Plant., ii. 1022).

Didymocarpus Burkei, W. W. Smith. Sp. nov. Plate ciii.

Species *Didymocarpo leucocalyci*, C. B. Clarke affinis sed inter species *Eudidymocarporum* foliis pulchre et mire pilosis distincta.

Herba erecta, circ. 30 cm. alta, habitu et magnitudine *D. leucocalyci* similis. Caulis dense fulvo-pilosulus. Folia basalia desunt; folia caulina opposita, 2-3 paria, inaequalia, ad 15 cm. longa, ad 8 cm. lata, petiolis plus minusve 3 cm. longis fulvo-pilosulis, elliptica vel ovato-elliptica, apice obtusa, basi breviter inaequaliterque cordata vel cuneata, serrata, supra dense pilosula, pilis miro modo in nodulos aggregatis, infra uniformiter pilosula; nervi utrinque 6-8 supra immersi, infra distinctiores. Inflor-escentiae cymosae multiflorae longe pedunculatae 3-4 ad apicem caulis aggregatae, foliis paululum longiores; pedunculi circ. 10 cm. longi, subrigidi glabri rubri, ad apicem iterum atque iterum divisi; pedicelli 5-10 mm. longi graciles; bractae ad 3 mm. longae, suborbiculares vel oblongae. Calyx 2-3 mm. longus, 2 mm. latus, glaber, fere ad imum in lobos quinque ellipticos obtusos fissus. Corolla circ. 12 mm. longa, glabra, in sicco purpurea; tubus cylindricus 1 cm. longus, 1.5 mm. latus, superne paululum ampliatus; lobi valde inaequales rotundati. Stamina inclusa, duo perfecta, filamentis pubescentibus antheris cohaerentibus; staminodia duo minima vel saepe absentia. Ovarium lineare breviter stipitatum disco brevi cylindrico. Fructus immaturus 1.5 cm. longus linearis, *D. leucocalycis* ei similis.

Upper Burma. Collected by Mr. D. Burke for Messrs. Veitch. Type in the Kew Herbarium.

Didymocarpus silvarum, W. W. Smith. Sp. nov. Plate civ.

Species *Didymocarpo Burkei*, W. W. Smith valde affinis sed effusior; foliis glabrioribus, distincte areolatis, floribus majoribus distincta.

Herba erecta vel ascendens, debilis, usque ad 20 cm. alta. Caulis minute fulvo-tomentellus. Folia basalia desunt; folia caulina opposita, plerumque duo paria, distantia, valde inaequalia, inferiora circ. 20 cm. longa, circ. 9 cm. lata, petiolis ad 7 cm. longis tomentellis, oblonga vel elliptico-oblonga, apice obtusa,

breviter inaequaliterque cordata, grosse irregulariterque serrata, supra areolata, nervulis distinctis, pilis in medio areolarum aggregatis (ut in *Didymocarpus Burkei* sed multo minus evidenter), infra praesertim in nervis nervulisque pilosula; nervi primarii utrinque 9-10. Inflorescentiae cymosae multiflorae longe pedunculatae, 1-3 in axillis foliorum superiorum ortae, folia inferiora aequantes; pedunculi circ. 8 cm. longi subrigidi glabri, iterum atque iterum divisi; pedicelli circ. 5 mm. longi graciles; bractaeae 2 cm. longae oppositae suborbiculares glabrae. Calyx 2 mm. longus, 1.5 mm. latus, fere ad imum in lobos ellipticos obtusos fissus, glaber. Corolla circ. 1.5 cm. longa, glabra, in sicco purpurea; tubus cylindricus 1.4 cm. longus, 2.5 mm. latus, superne paululum ampliatus; lobi valde inaequales rotundati. Stamina duo inclusa supra medium tubum inserta antheris cohaerentibus; staminodia nulla. Ovarium lineare breviter stipitatum pubescens in fructu glabrescens, disco brevi cylindrico instructum. Fructus immaturus 1.8 cm. longus, linearis.

China:—Yunnan, Szemao; from forests at 4000 ft.; pink flowers; Henry 12463, in Herb. Kew. A species very closely allied to the Burmese *Didymocarpus Burkei*, and evidently the equivalent of that species in the Chinese area. The greater development of the peculiar arrangement of the hairs on the leaf in the Burmese plant makes a striking difference in the aspect of the two, and considering the restricted specific distribution of most *Didymocarpi*, I have thought it better to keep them distinct.

var. *glandulosa*, W. W. Smith.

Valde affinis sed robustior, folia basi cuneata nec cordata, supra uniformiter parce pilosula; pedunculi pedicellique sparse albo-glanduloso-pilosa. Fructus fere 3 cm. longus valvis utrinque solutis.

China:—Yunnan. From Manmei (?), S. of Red River, 7000 ft.; Henry 9745, in Herb. Kew. and Herb. Edin. The specimen is imperfect, scarcely equals 12463, but is very closely allied. 9745B, in Herb. Edin. in fruit only, is the same.

***Didymocarpus Margaritae*, W. W. Smith. Sp. nov. Plate cv.**

Species *Eudidymocarporum*, affinis *Didymocarpus Kerrii*, Craib, sed calyce ad imum in lobos lineares patentes fissis conspicua.

Herba erecta fere acaulis (inflorescentia 15-18 cm. alta) gracillima. Folia 4-6, radicalia vel subradicalia, petiolis 3-10 cm. longis pilosulis, suborbicularia, plerumque 4-5 cm., nonnunquam 8 cm. diametro, basi aequaliter cordata, serrata (pro magnitudine grossius), supra adpresse pilosa, infra praesertim in venis; nervi utrinque 4-5, supra indistincti, infra conspicui

sed vix eminentes. Inflorescentiae, 1-2 cymosae 4-20-florae longe pedunculatae folia superantes. Pedunculi, 10-15 cm. longi, flexuosi, glabrescentes; pedicelli 5-10 mm. longi capillis albis minutis glanduloso-capitatis sparse instructi; bracteae suborbiculares vel oblongae 2-3 mm. longae. Calyx 4 mm. longus glaber fere ad imum in lobos 5 lineares subrecurvos fissus. Corolla inaequaliter bilabiata glabra aurantiaca 2 cm. longa; tubus cylindricus 1.2 cm. longus, 2 mm. latus, paululum superne ampliatus; lobi valde inaequales patentes. Stamina duo inclusa filamentis glabris, antheris cohaerentibus; staminodia in floribus dissectis desunt. Ovarium circ. 1 cm. longum lineare glabrum stylo 3 mm. longo, stigmatibus circulari indiviso. Fructus 2-2.5 cm. longus, linearis, in medio 2.5 mm. latus, subfalcatus, valvis utrinque solutis.

China:—Yunnan. In the mountains to the N.W. of Szemao; at 5000 ft.; flowers orange; Henry 12380 B. Types in the Herbaria of Kew and Edinburgh.

Henry 12380A, in Herb. Edin., fruiting specimen without flowers; and Henry 12380, in Herb. Edin., Szemao forests, 4800 ft., shaded cliffs, flowers orange, appear to be the same.

Didymocarpus Mengtze, W. W. Smith. Sp. nov. Plate cvi.

Species *Eudidymocarporum* a *D. leucocalyce*, C. B. Clarke haud remota, calyce albido tenuiter membranaceo ad mediam partem vel ultra fisso conspicua.

Herba suberecta 20-40 cm. alta, caule sparse pilosulo et glabrescente. Folia radicalia desunt; caulina ad apicem approximata, opposita, 2-3 paria, subaequalia, petiolis circ. 2 cm. longis pilosulis, circ. 10 cm. longa, circ. 6 cm. lata, oblonga, apice obtusa, basi rotundata vel rarius subcuneata, margine grosse irregulariterque serrata, membranacea, supra sparse minute pilosula, subter pallidiora, sparse pilosula, venis utrinque 6-8, satis distinctis. Inflorescentiae 1-2 cymosae, circ. 10-florae, in axillis foliorum superiorum, 8-12 cm. longae, folia paululum superantes; pedunculus circ. 7 cm. longus, flexuosus, glaber, parce ramosus, pedicellis gracillimis ad 2 cm. longis, capillis minutis glanduloso-capitatis sparse instructis; bracteae 2-3 mm. longae, oppositae oblongae albae. Flores inter minores, angustissimi, subnutantes, flexuosi, gracillimi. Calyx poculiformis 4-5 mm. longus, 2-3 mm. latus, ad mediam partem vel ultra in lobos patentes obtusos fissus, tenuiter membranaceus, albidus. Corolla circ. 2 cm. longa, breviter bilabiata, glabra, in sicco purpurea; tubus cylindricus 1.8 cm. longus, 2 mm. latus, superne paululum ampliatus; lobi valde inaequales, rotundati. Stamina inclusa, perfecta duo, filamentis glabris antheris

cohaerentibus; staminodia in floribus dissectis desunt. Ovarium lineare glabrum disco parvo cylindrico dentato instructum. Fructus linearis vix 3 cm. longus, in medio 2 mm. latus, breviter stipitatus, valvis utrinque solutis.

China:—Yunnan. Mountains to the north of Mengtze; at 7000 ft.; Henry 10232. Types in the Kew and Edinburgh Herbaria.

Didymocarpus purpureo-bracteata, W. W. Smith. Sp. nov.
Plate cvii.

Species *Rottlerae* (*Didymocarpo*) *yunnanensi*, Franch. affinis; habitu ascendente, calyce magno tubuloso, fructibus praelongis siliquaeformibus conspicua.

Herba suberecta circ. 30 cm. alta, caule flexuoso, ad apicem sparse rufo-pilosulo, ad basin glabrescente. Folia radicalia desunt; in parte inferiore caulis plerumque delapsa, in parte superiore 2-3 paria, distantia, inaequalia, petiolis 2-8 cm. longis, parce pilosis, circ. 15 cm. longa, circ. 9 cm. lata, ovato-elliptica vel ovata, apice breviter acuminata, basi rotundata, regulariter serrata, membranacea, supra subglabra (juniora pilis minutis albidis furfuraceis sparsis instructa), infra subglabra venulis sparse pilosulis; nervi primarii utrinque 6-9. Inflorescentiae 1-2 in axillis superioribus cymosae 6-12-florae circ. 15 cm. longae, folia, paululum superantes. Pedunculi circ. 8 cm. longi flexuosi glabri 2-3-plo divisi, pedicellis 1-2 cm. longis; bracteae 3 mm. longae ovatae vel ovato-oblongae, conspicuae, purpureae. Calyx 8 mm. longus, 4 mm. latus tubulosus glaber in lobos quinque breves obtusos ad quartam partem fissus. Corolla circ. 3-4 cm. longa, bilabiata, purpurea, lineis multis atro-purpureis pererrata; tubus 2-3 cm. longus, basi 3 mm. latus, cylindricus, superne ad 8 mm. sensim ampliatus; lobi valde inaequales, rotundati. Stamina duo inclusa antheris cohaerentibus filamentis glabris. Ovarium lineare glabrum disco cylindrico 2 mm. longo instructum. Fructus 4-6 cm. longus linearis breviter stipitatus.

China:—

Yunnan. Mountains to the S.E. of Mengtze; at 6000 ft.; flowers purple-pink; Henry 9189, in Herb. Kew.

S. of Red River from Manmei; at 6000 ft.; Henry 9189A, in Herb. Edin.

Forests in Teng-Chen-Lin Mountains, 7000 ft.; purplish flowers; Henry 9746A, in Herb. Edin.

S. of Red River from Manpan; 6000 ft.; purple flowers; Henry 9746, in Herb. Edin.

Didymocarpus Veitchiana, W. W. Smith. Sp. nov.

Species inter *Eudidymocarpus* ponenda, ex affinitate *D. macrophyllae*, Wall. sed habitu caulescente, calyce tubiformi breviter lobato, flore multum longiore lilacino, inter alia facile distinguenda.

Herba perennis ad 20 cm. alta. Caules multi robusti, e radice satis crassa sublignosa orti, plus minusve dense fulvo-pubescentes. Folia 2-4 paria; petiolus ad 3 cm. longus, pubescens; lamina ad 10 cm. longa, ad 6 cm. lata, ovata, basi inaequaliter breviterque cordata, apice subacuta, margine serrata, supra parce pilosa, infra glabra nisi in venis pilosulis, subcinerascens; nervi utrinque 4-5, supra impressi, infra eminentes. Cymae pro sectione pauciflorae (saepius circ. 8-floriferae) in axillis superioribus, ad 8 cm. longae, bis terve divisae, glabrae, pedunculis 2-3 cm. longis rubro-nitentibus, bracteis perlate ovatis fere orbicularibus concavis 1 cm. diametro purpureo-rubris, pedicellis saepius 3-natis plus minusve 15 mm. longis, floribus pro sectione magnis subnutantibus. Calyx 1 cm. longus, tubiformis, perbreviter (vix usque ad 1 mm.) obtuse lobatus, corollae tubo subadpressus, purpureo-rubronitens glaber. Corolla fere ad 4 cm. longa tubulosa subdeclinata, a basi gradatim dilatata ventricosa, inaequaliter bilabiata, lobis quinque fere aequilongis rotundatis, glabra, lilacina, circ. 16 lineis purpureis longitudinaliter pererrata. Stamina inclusa, perfecta duo, antheris cohaerentibus albo-pilosulis, filamentis glabris. Ovarium lineare glabrum ad 2 cm. longum, disco cylindrico 2-3 mm. longo flavido ornatum. Capsula matura de-est.

China:—Collected by Mr. E. H. Wilson in Yunnan, Western China. In 1902 a living plant was presented to the Royal Botanic Garden, Edinburgh, by Messrs. Veitch of Chelsea, under 15a W. This plant flowered in a cool plant-house for the first time in October 1909, and again in 1910. From the plant which flowered in 1911 a specimen has been dried as the type in the Edinburgh Herbarium. A figure of the plant will appear in a subsequent number of the "Notes."

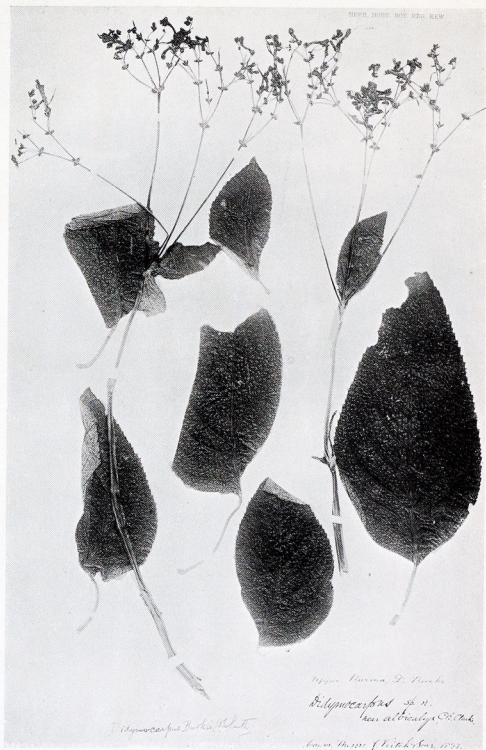
"*Didymocarpus Veitchiana* is quite a striking plant, the leaves having the green sheen of a begonia, and the dark claret-purple flower-buds show up conspicuously against them. It is comparatively easy to grow, requiring a good loam mixed with plenty of leaf soil. The herbaceous stems taken from the top of the woody rootstock are easily rooted, as are the leaves if placed in a warm, moist case."—L. B. Stewart.

LIST OF PLATES.

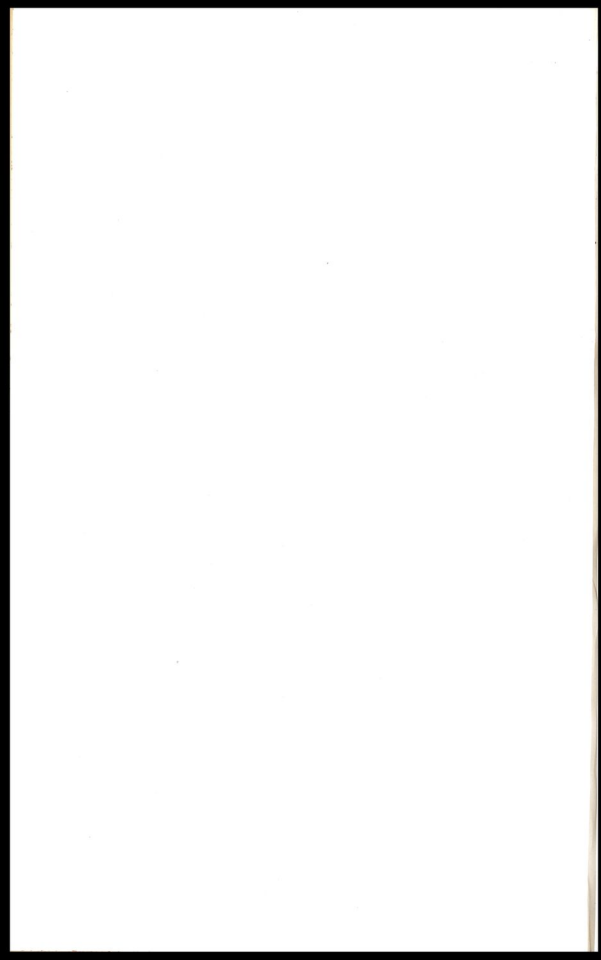
Illustrating W. W. Smith's Paper on *Didymocarpus*.

The plates are taken from photographs by Mr. R. Adam of dried specimens in the Herbarium of the Royal Gardens, Kew (kindly lent by the Director), and from specimens in the Herbarium of the Royal Botanic Garden, Edinburgh.

- PLATE CIII. *Didymocarpus Burkei*, W. W. Smith. Sp. nov.
CIV. *Didymocarpus silvarum*, W. W. Smith. Sp. nov.
CV. *Didymocarpus Margaritae*, W. W. Smith. Sp. nov.
CVI. *Didymocarpus Mengtze*, W. W. Smith. Sp. nov.
CVII. *Didymocarpus purpureo-bracteata*, W. W. Smith. Sp. nov.

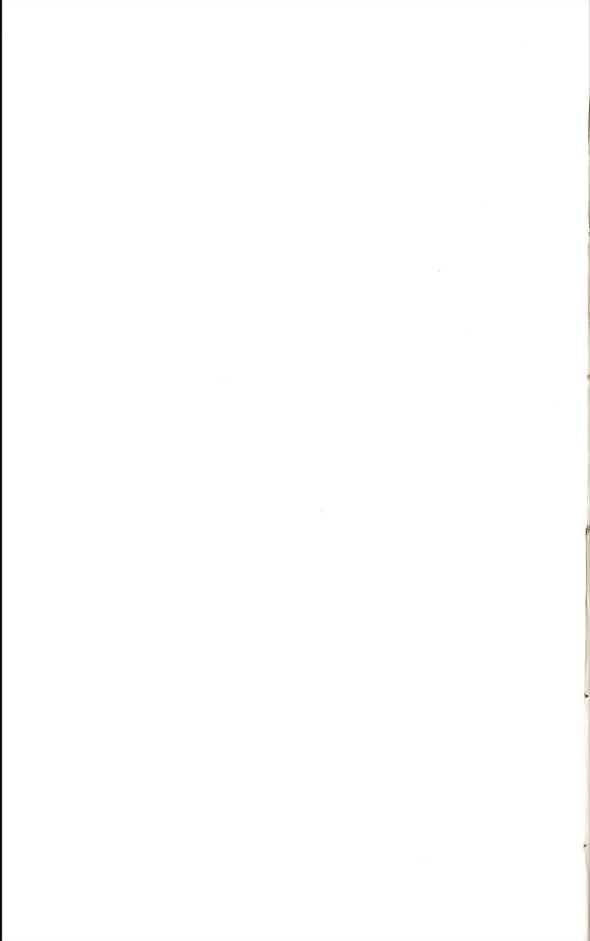


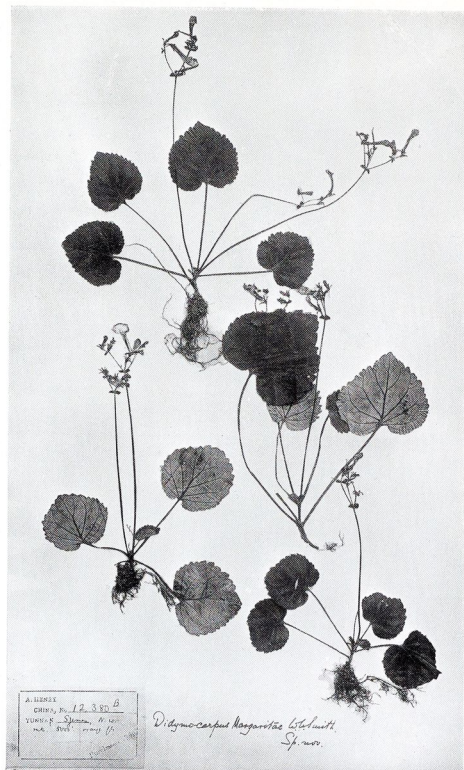
Didymocarpus Burkei, W. W. Smith.



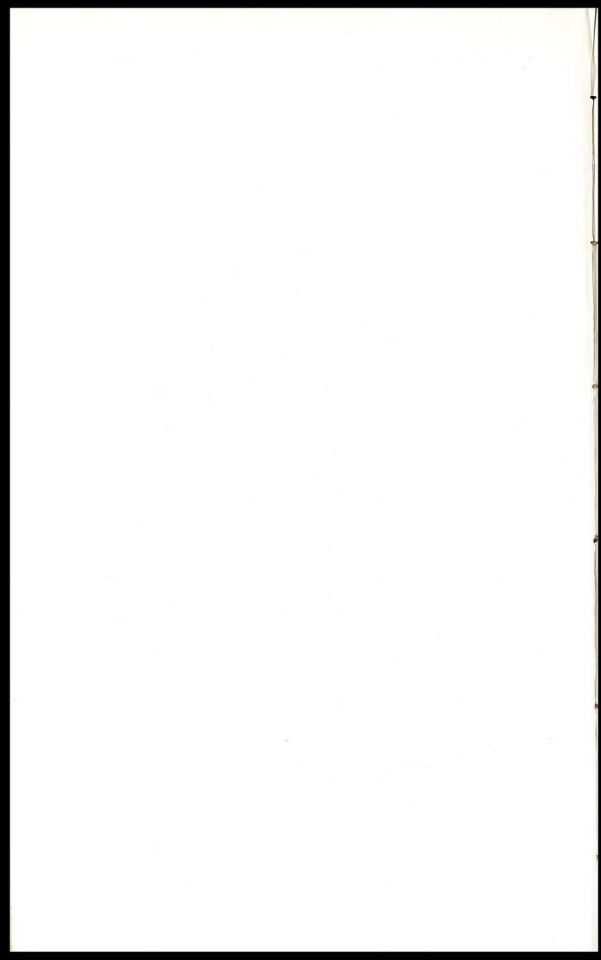


Didymocarpus silvarum, W. W. Smith.



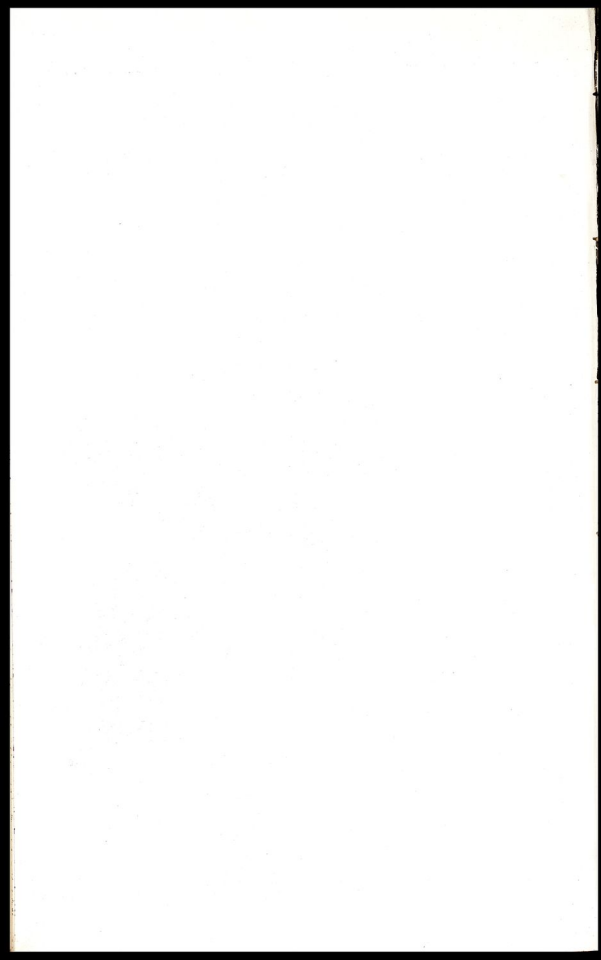


Didymocarpus Margaritae, W. W. Smith.





Didymocarpus Mengtze, W. W. Smith.





Didymocarpus purpureo-bracteata, W. W. Smith.

